

BORIN, A. (Leningrad)

A chain of friendly hands. Izobr. i rats. no. 4:21-23 Ap '59.
(MIRA 12:7)

1. Spetsial'nyy korrespondent zhurnala "Izobretatel' i ratsionalizator."
(Metal cutting)

BORIN, A.

It started in Riga. Izobr.i rats. no.7:24-26 J1 '59.
(MIRA 12:11)

1. Spetsial'nyy korrespondant zhurnala "Izobretatel' i ratsionalizator."

(Riga--Technical education)

BORIN, A.

"Obligatory" schedule production plan, dwindled millions. Izobr.i
rats. no.3:20-23 Mr '60. (MIRA 13:6)
(Kharkov--Efficiency, Industrial)

ZUBKOV, B. (Lugansk); BORIN, A.

The initiative of Ural workers is an example for all. Izobr.i rats.
no.9:34-35 S '60. (MIRA 13:10)

1. Spetsial'nyye korrespondenty zhurnala "Izobretatel' i ratsionali-
zator."

(Technological innovations)

BORIN, A.

This is not in the jurisdiction of the office for the promotion of
innovations and inventions, is it? Izobr. i rats. no. 4:40-42 Ap
'61. (MIRA 14:4)

(Technological innovations)

BORIN, A.

Dostoevskii's grandson. Izobr.i rats. no.11:18 N '62. (MIRA 15:12)
(Dostoevskii, Andrei Fedorovich)

~~BOOK 77~~
GROSSMAN, E.P., S.S.KRICHEVSKII, and A.A. BORIN

K voprosu o potere ustoichivosti konstruktsiei kryla v polets. Moskva, 1935.
62 p., diagrs. (TSAGI. Trudy, no. 202)

Summary in English.

Bibliography: p. 55.

Title tr.: Problem of loss of stability of the wing structure in flight.

QA911.M65 no.202

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress,
1955

BORIN, A.B.; PRESNYAKOV, A.G.; LIVANOV, A.K., red.; PROZOROVA, L.Ye.,
tekhn. red.

[Club of young inventors] Klub molodykh izobretatelei; sbornik.
Moskva, Izd-vo "Molodaia gvardiia," 1962. 415 p.

(MIRA 16:7)

(Technological innovations)

BORIN, A.B.; SLESAREVA, V.I.

Fading of cyanine dyes in darkness. Trudy NIKFI no. 46:49-64:1162.

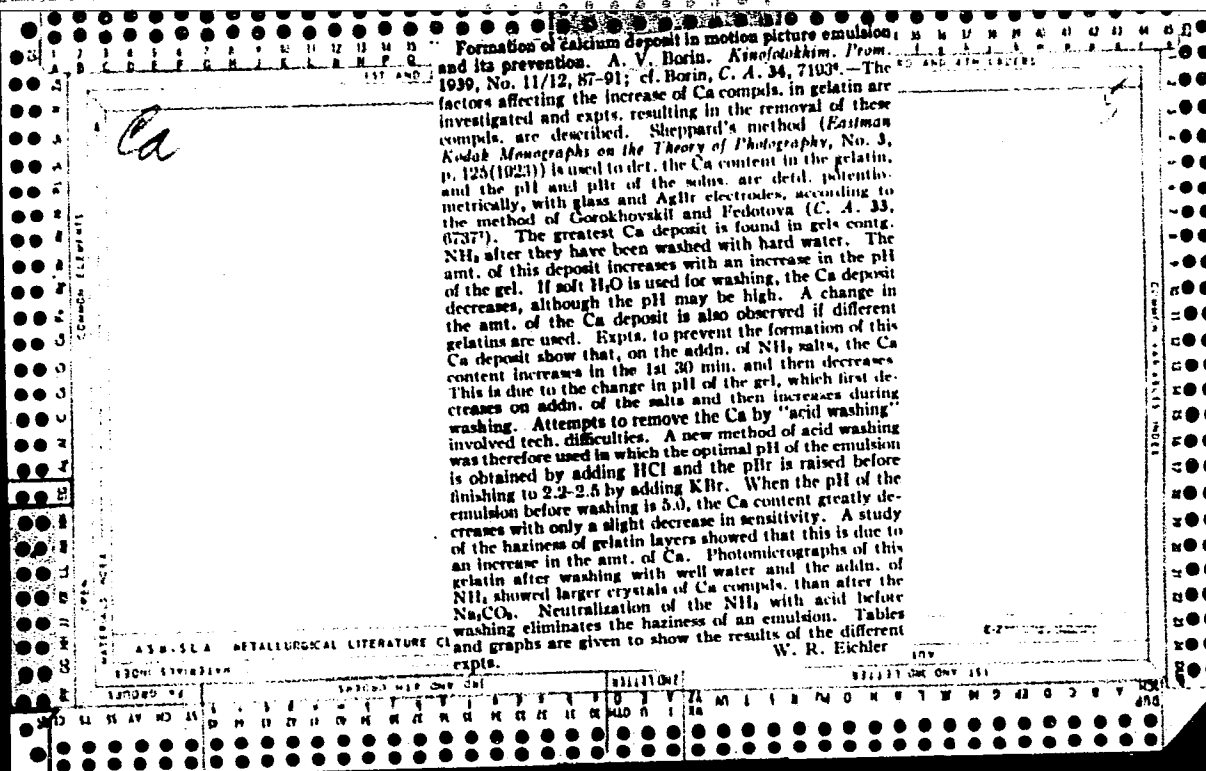
(Minsk 10:8)

PROCESSING AND PROPERTIES INDEX											
<p>Bc</p> <p>B-II-3</p> <p>Influence of acid substrata on the photographic properties of emulsions. M. I. Semon and A. V. Bonny (Photo-Kino Chem. Ind., 1955, No. 1-2, 78-83).—The desensitizing effect of substrata depends on the stabilizing acid retained in the layer. The effect \propto the mol. concn. The amount of acid left depends on its concn. in the substrating fluid and on the operation of the machine. AcOH (> 12 g. per litre) was better than phthalic or malic acid. Ch. Ana. (c)</p>											
<p>ASB-31A METALLURGICAL LITERATURE CLASSIFICATION</p>											
<p>100000 H10 000 000</p>											
<p>100000 H10 000 000</p>											

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<p><i>Ca</i></p> <p>Investigation of the elastic forces produced in nitro-cellulose films. A. V. Bortov. <i>Colloid J. (U. S. S. R.)</i> 3, 367-77 (1957).—Data are given on the effects of concn., temp., solvent, film thickness, etc. The relationships found are explained as due to increased orientation of the micelles with increasing swelling. W. H. Matheson.</p>																			
<p>23</p>																			
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
<p>10000 11000 12000 13000 14000 15000 16000 17000 18000 19000 20000 21000 22000 23000 24000 25000 26000 27000 28000 29000 30000 31000 32000 33000 34000 35000 36000 37000 38000 39000 40000 41000 42000 43000 44000 45000 46000 47000 48000 49000 50000 51000 52000 53000 54000 55000 56000 57000 58000 59000 60000 61000 62000 63000 64000 65000 66000 67000 68000 69000 70000 71000 72000 73000 74000 75000 76000 77000 78000 79000 80000 81000 82000 83000 84000 85000 86000 87000 88000 89000 90000 91000 92000 93000 94000 95000 96000 97000 98000 99000 100000</p>																			

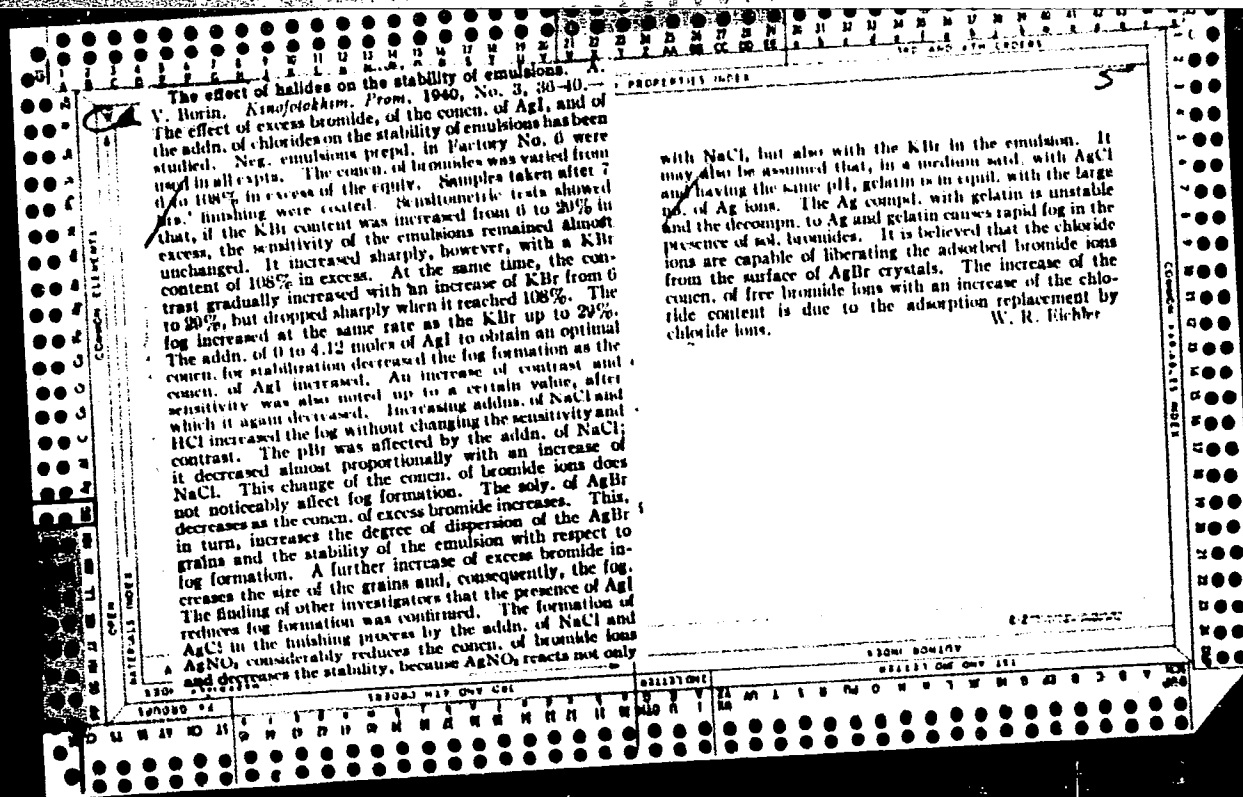
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX										EFFECTS OF STORAGE									
<p>5</p> <p>The problem of stable moisture in motion-picture film.</p> <p>A. V. Borin. <i>Kinofotokhim. Prom.</i> 1935, No. 5, 49-51.</p> <p>The moisture content of film emulsion was detd. by weighing a sample of emulsion-coated film together with a sample of the film support (a) after having been stored under test conditions and (b) after having been dried at 100° to const. wt. The moisture content of the emulsion alone was detd. by subtracting the difference in the wts. of the film support from the difference in the wts. of the emulsion-coated film. The moisture content of film emulsions varies directly with the relative humidity of the air. As the moisture content approaches a stable condition during drying, the rate of change slows down. Moving the film during drying increases the rate of evapn. Film wound in tight rolls changes in moisture content principally at the edges of the film. Under conditions of extreme humidity, sticking and fog occur at the edges of the film. Sticking of the wound roll was absent at 65-70% relative humidity.</p> <p>C. J. Kunz</p>																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION										EFFECTS OF STORAGE									
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									

LIST AND TWO ORDERS		PROCESSES AND PROPERTIES INDEX	
<p>Deformation of the emulsion layer of motion picture film. A. V. Horin. <i>Kinofotokhim. Prom.</i> 1939, No. 4, 32-7; <i>Photo-Abstracts</i> 10, 217-8. -- "Prilling" is due to insufficient hardness of the emulsion layer, and is mainly attributable to the tendency of gelatin to become softer during ripening, probably because of hydrolysis. The hardness may be increased by addition of Cr alum and phenol, preferably when making up the emulsion. It is also important for the gelatin to be introduced at the correct stage in the emulsion-making operations: (a) soft gelatin must be added at the commencement, and medium and very hard gelatin in the middle and at the end, resp.; (b) the largest possible amount of gelatin must be introduced during the 2nd ripening. Some good results can be achieved by introducing the gelatin at the end of the 2nd ripening or before coating the emulsion. Other factors are considered, and a method of detg. the hardness of the emulsion layer is described.</p>		<p>5</p>	
<p>ASA-FLA METALLURGICAL LITERATURE CLASSIFICATION</p>		<p>EXAMINER'S SIGNATURE</p>	
<p>EXAMINER'S SIGNATURE</p>		<p>EXAMINER'S SIGNATURE</p>	



1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																										5TH AND 6TH ORDERS																									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50																												
PROCESS AND PROPERTIES INDEX																																																																													
5																																																																													
Effect of moisture on photographic emulsions. A. V. Horin. <i>Soviet. Foto</i> 1940, No. 5, 22. --B. refers to Sheppard and Wightman's work (C. A. 27, 230) on the effect of moisture on the photographic properties of films. The decrease in sensitivity observed by S. and W. after exposure of the film to moisture is slowly regained to about 50%, or more, after drying. This observation has been confirmed on Soviet films, and it has been observed, further, that the sensitivity of the film is proportionally lowered, by moisture, in all parts of the spectrum to which the films were sensitized, and that it is proportionately largely regained on drying. W. R. Eichler																																																																													
ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION																																																																													
FROM 1ST DIVISION																																																																													
FROM 2ND DIVISION																																																																													
FROM 3RD DIVISION																																																																													
FROM 4TH DIVISION																																																																													
FROM 5TH DIVISION																																																																													
FROM 6TH DIVISION																																																																													

1ST AND 2ND ORDERS		PROCESSES AND PROPERTIES INDEX	
<p>Photographic study of gelatin. A. V. Borin. <i>Kinofotokhim. Prom.</i> 1940, No. 2, 41-4. —The empirical method of studying photographic gelatin used at the present time causes a great deal of waste material without yielding satisfactory results. B. has attempted to find a method, therefore, by which, in addn. to the evaluation of the photographic activity of gelatin, the stage of emulsion-making at which addn. of gelatin would have the optimal effect could be detd. Other authors investigating the different effects of gelatin addn. on the properties of photographic emulsions have found that this effect greatly changes, depending upon whether the gelatin was added during ripening or finishing. Two variants of a standard com. emulsion formula were now used. In the 1st, the emulsion was divided into 2 parts and the gelatin to be studied was added to 1 part but omitted from the other during finishing. The part with the addn. was dild. with distd. H₂O to obtain the same concn. of gelatin as before. The photographic properties of the 2 portions were then detd. In the 2nd variant, the emulsion was divided into several parts. A standard gelatin was added to 1 part and the gelatins to be studied were added to the other parts. This was followed by a sensitometric study and a comparison of the photographic properties of the different portions. Standard p-aminophenol developer was used. The use of the 2nd variant has the advantage of permitting a simultaneous study of several gelatins. It was found that the addn. of some gelatins caused more rapid increase of the sensitivity during finishing, while in others, the photographic properties did not greatly change. In other</p>		<p>samples, the addn. of gelatin retarded the increase of sensitivity and formation of fog during finishing. The γ changed only in 1 case where the increase of the γ was retarded during finishing by the addn. of gelatin. This is similar to Makarov's findings (C. A. 31, 527). This method simplifies the compounding of emulsions and it shows that, in certain cases, the addn. of gelatin can be omitted during finishing and the stability of the emulsion increased because of the lower content of sensitizing substances.</p> <p style="text-align: right;">W. R. Eichler</p>	
<p>ASA-35A METALLURGICAL LITERATURE CLASSIFICATION</p>			



CA 5

The kinetics of washing. A. V. Bozin and M. N. Ivanov. *Kinofotokhim. Prom.* 1960, No. 3, 50-1. — Washing a photographic emulsion considerably affects the properties and stability of the finished product. In B. and I.'s expts. KBr, NH₄OH or HCl was added to gelatin gels of different concns. to simplify the study. The diam. of the emulsion nodules was the same in all expts. The washing was carried out by decantation, the H₂O being changed every 0.5 hr. The substances washed out from the emulsion were detd. in g. per l. after each decantation. The KBr content was detd. potentiometrically with a AgBr electrode, and the content of NH₄ or HCl by titration. It was found that KBr washes out about twice as fast as the other 2 substances. A study of the change in the speed of washing with the temp. showed that the speed increases with increase of the temp. in almost direct proportion. The change in the speed of washing of 1% gels of different batches differs slightly for NH₄ but is approx. the same for the other substances. W. R. Richter

ASST. SEC. DETAIL/GENERAL LITERATURE CLASSIFICATION

COMMON ELEMENTS										PROCESSING AND PROPERTIES INDEX										COMMON ELEMENTS									
MATERIALS INDEX										PROCESSING AND PROPERTIES INDEX										COMMON ELEMENTS									
<p>Study of the stability of the photographic properties of emulsions. A. V. Borin. <i>Kinofotokhimi</i>, <i>Pril.</i> 6, No. 1, 23-30(1940); cf. C. A. 35, 3979.—B. has found a relation between the stabilizing action of Br ions and the pH of the medium, expressed by a shift of the max. of stabilization toward lower concns. of Br ions with decreasing pH values, and toward higher concns. with increasing pH values. A relation was also found between the fogging action of OH ions and the pH of the medium expressed by a shift of the threshold of instability toward lower concns. of hydroxyl ions with increasing pH, and toward higher concns. with decreasing pH. The change of the fog during finishing is reversible and depends on the pH of the medium, decreasing at higher pH values. A similar effect was also noted with respect to the concn. of Br ions where the effect of reversibility of the fog was much weaker at higher concns. of Br ions and completely disappeared at a certain pBr. It was assumed that the relation between the concn. of OH and Br ions and fog formation depends on the no. of ions adsorbed to the surface of AgBr crystals. In contrast to the effect of OH ions, an increase of the no. of Br ions adsorbed to the crystals prevents coagulation of metallic Ag about Ag₂S and the formation of fogging centers but also reduces the developability of the crystals. An analogous change of the fog during long finishing was observed in artificial aging of air-dry emulsions in the thermostat.</p> <p style="text-align: right;">W. R. Eichler</p>										<p>ASB-55A METALLURGICAL LITERATURE CLASSIFICATION</p>										<p>COMMON ELEMENTS</p>									

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESS AND PROPERTIES INDEX																																																			
<p>Optimal temporary hardness of wash water for photographic emulsions. A. V. Borin. <i>Kino-fotokhim. Prom.</i> 6, No. 7, 34-6(1940); cf. C. A. 35, 1711⁶.—The optimal temporary hardness of the wash water was found to be 4-6 German degrees. The increase in permanent hardness of the wash water considerably increases the Ca content of gelatin. Change in pH of the gelatin from 5.8 to 9.0 causes a decrease in the Ca taken up. If the permanent hardness is obtained by CaSO_4, the gelatin takes up less Ca than if the permanent hardness is obtained by CaCl_2. Hardness is not caused by the increase in Ca content of the gelatin when used with water of high permanent hardness although Na_2CO_3 treatment of the gelatin will cause haziness. An equil. is obtained between the Ca content in gelatin and the hardness of the water. The optimal permanent hardness of the water used in washing gelatin was not found.</p> <p style="text-align: right;">W. R. Eichler and R. C. Houck</p>																																																			
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			
1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									

PROCESSING AND PROPERTIES INDEX	
CO	5
<p>The formation of white streaks on motion-picture films. A. V. Borin. <i>Kinofotokhim. Prom.</i> 6, No. 11/12, 34-7 (1940); cf. C. A. 34, 7767. — The effect of mech. treatment of photographic film upon the optical d. after development was studied in a series of tests which involved bending or creasing instead of rubbing with a stylus. It was found that diln. of the emulsion by the addn. of as much as 200 cc. of 10% gelatin per kg. of positive emulsion had no effect. Likewise, variation in the concn. of saponin or "Petrov contact" was without effect. The addn. of glycerol to the emulsion is of assistance in overcoming the effect. The same protection can be obtained by sufficient humidification of the film to provide a crit. moisture content. Humidification or even soaking the film in H₂O after the mech. treatment does not prevent the markings. The effect is attributed to a triboelec. effect resulting from the deformation of the film. Elec. discharges then produce "considerable photochem. destruction on the surface of the AgBr crystals." Increase in moisture content prevents the marking by increasing the elec. cond. The effect in exposed areas is to reduce the developable d. in a manner equiv. to solarization. D. is increased by creasing exposed areas. While in most of this work the exposure was given after creasing, the same type of white streaks resulted when exposure was given previous to creasing. A similar reversal of d. was observed with the forked markings caused by strong elec. discharges on the film. W. R. Richter and C. E. Ives</p>	
<p>ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>	
<p>EXTRACTED FROM</p>	
<p>EXTRACTED FROM</p>	

Sensitizing & Sensitometry

P.A.

737

771.534.21

Photographic Properties of Dyes of the Thiocarbocyanine Series. A. V. BORIN.
J. Appl. Chem. U.S.S.R., 19, 1,325-34, 1946.—Light sensitivity S , and spectral sensitivity S_λ (from 400 to 700 m μ) of a negative AgBr emulsion containing 2% AgI, spread at 11-12 g. per sq.m., were determined with addition of varying amounts of two sensitising dyes, in alcohol solution. Exposures were made to a 2,360 K. incandescent lamp and to average sunlight. From S_λ , the monochromatic actinic flux A_λ was calculated by $A_\lambda = Y_\lambda S_\lambda$ where Y_λ = spectral energy distribution in the incident radiation. Increase of the amount of sensitizer from 5 to 20 ml. per l. (from about 0.35×10^{-4} to 1.4×10^{-4} g./g.AgBr) results in an increase of S . With further rise of the concentration S rises up to 40 ml. per l., then falls; at the same time, from 20 ml. per l upwards, the contrast coefficient falls markedly.
 H.O.D. (Based on *Chem. Abs.*)

BORIN, A. V.

PA 13T31

USSR/Chemistry - Sensitization
Chemistry - Emulsions

Sep 1946

"A Simultaneous Sensitization of Photosensitive
Emulsions with Two Pigments," A. V. Borin, G. P.
Trochimovich, 8 pp

"Zhur Prik Khim" Vol XIX, No 9, 931-38

Investigation of the simultaneous sensitizing action
of various combinations of pigments on photo-sensitive
emulsions. Two thiocarbocyanine and one thiopseudo-
cyanine basic pigments were used.

13T31

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
<div style="display: flex; justify-content: space-between;"> 23 34 </div> <p>Investigation of Hypersensitization of Photosensitive Layers. (In Russian.) A. V. Boris, <i>Journal of Applied Chemistry</i> (U.S.S.R.), v. 20, nos. 1-2, 1947, p. 39-46.</p> <p>The photosensitization capacity of layers containing bromine ions of different concentrations was investigated using sensitometric and spectro-sensitometric methods. The mechanism of hypersensitization is discussed. 14 ref.</p> <p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			
COMMON ELEMENTS																										COMMON VARIABLES INDEX																									
OPEN																										CLOSED																									
MATERIALS INDEX																										PROCESS INDEX																									
COMMON ELEMENTS																										COMMON VARIABLES INDEX																									

BORIN, A. V.

PA 20/49T96

USSR/Physics
Photographic Emulsions - Sensitivity
Oct 48

"Optic Sensitization and the Contrast Coefficient
of Light Sensitive Layers," A. V. Borin, Z. I.
Gratsianskaya, 7 pp

"Zhur Tekh Fiz" Vol XVIII, No 10, 1325-31

Shows that in the case of sensitized photographic
layer, coefficient of contrast in sensitized region
can be greater, equal to, or less than the contrast
coefficient for the region of self-light sensi-
tivity of the emulsion. Discusses conclusions on
factors causing changes in spectral light

20/49T96

USSR/Physics (Contd)
Oct 48

sensitivity and contrast coefficient and their
relationship to amount of dye in the emulsion.
Submitted 11 Feb 48.

20/49T96

USSR/Astronomy - Photography

Jan/Feb 52

"Photographic Film Color-Sensitive in Visual Spectrum," A. V. Borin, D. Ya. Martynov T. I. Smolko, Astron Obs Iment Engelgardt, Res Lab of Glavkino-plenka

"Astron Zhur" Vol XXIX, No 1, pp 5-13

Film samples were tested and numerated 1-5, 1 for excessive sensitivity to blue-violet, 3 for satisfactory sensitivity to all colors, 5 for excessive sensitivity to red. Plots results in sensitivity curves as compared to sensitivity of human eye and tabulates in relation to photographic emulsion

202T2

USSR/Astronomy - Photography (Contd)

Jan/Feb 52

compn. Presents curves of photographic intensity of stars as compared to photovisual intensity. Indebted to A. F. Torondzhadze, M. Ye. Yemel'yanenko and V. A. Kolychov. Received 10 Nov 51.

202T2

BORIN, A. V.

DOKIN, A. V.

Absorption Spectra of Thiocarbocyanine Dyes in Aqueous Gelatin Solutions.
A. V. BORIN. Doklady Akad. Nauk S.S.S.R., 1932, 86, 969-972. Absorption
and Gelatin Gel. A. V. BORIN. Doklady Akad. Nauk S.S.S.R., 1932, 86,
1141-1143.—An examination is made of the effects of various factors on the
intensities of the J -bands (longer wave, attributed to an aggregated so-called
"meso" form of the dye) and β -bands (shorter wave, attributed to the dimeric
form of the dye) that often appear in the absorption spectra of solutions of
thiocyanine dyes when gelatin is added. The dye examined is 3:3'-dimethyl- β -
ethylthiocarbocyanine. It is shown that the β -band, but not the J -band, follows
Beer's law as regards the effect of changes in concentration. The intensity of
the J -band is diminished and that of the β -band increased by (a) increasing the
temperature of the gelatin solution when preparing the mixture by adding the
molecularly dispersed dye (alcoholic solution) to aqueous gelatin, (b) decreasing
the temperature of the dye solution when preparing the mixture by adding an
aqueous solution of dye to aqueous gelatin, and (c) vigorous agitation of the
solution during mixing, although subsequent agitation or heating is without
effect. It is further observed that different quantities of gelatin give widely
varying values for the relative intensities of the β - and J -bands. Further
experiments are carried out with films of fractionated gelatin formed on the
surface of silver bromide or of silver bromide containing various amounts of
silver sulphide; this surface is prepared by fusing the silver bromide (and silver
sulphide) in a crucible and cooling. The surfaces of the film are stained with
the dye and thin sections cut for examination. At the surface formed in contact
with silver bromide, β -absorption is increased and J -absorption diminished,
these effects being greatly reduced by addition of silver sulphide to the silver
bromide. These effects are attributed to the orientation of polypeptide side-
chains at a silver bromide surface. A similar effect is found at a mercury surface.
J. Soc. Dyers and Colourists.

BORIN, A.V.

Dependence of photochemical latensification of the latent image upon the time of the finishing of the emulsion. Zh. L. Brown and A. V. Borin (Odessa State Univ.). Doklady Akad. Nauk SSSR, 1953-5 (1953).—The relation

between the degree of chem. ripening of an emulsion and the magnitude of latensification caused by a uniform low-intensity 2nd exposure was investigated. The sensitometric exposure was made to white light, and the latensifying exposure (I) of one hour's duration was made to monochromatic light. The max. value, ΔD_s , for the increase in c. produced by I in a given series of expts. was selected as the criterion of latensification. If I of energy $E\lambda$ caused an increment, ΔD_s , in d. at a certain λ , the exposure $E'\lambda$ necessary to produce ΔD_s was calcd. from the equation: $\log E'\lambda = \log E\lambda(\Delta D_s/\Delta D_s)$. The spectral latensification coeff. was defined as $S'\lambda = 1/E'\lambda$. The dependence of $\log S'\lambda$ and of the initial sensitivity of the emulsion on λ is similar. Exptl. data are presented for $S'\lambda$ values detd. at 460 m μ , for emulsions which are not optically sensitized. $S'\lambda$ at first increases with increasing time of chem. ripening. When the emulsion is not Au sensitized, the max. in $S'\lambda$ and in sensitivity to the primary exposure are reached at about the same time of chem. ripening. When the emulsion is sensitized with Au, the max. $S'\lambda$ is reached before the max. sensitivity. Optically sensitized emulsions show a more complex picture. The latensification effect is greatest in the wave-length range corresponding to max. optical sensitization.

T. H. James

USSR/ Physics - Photography

FD-1046

Card 1/1 : Pub. 153 - 17/23

Authors : Borin, A. V.; Makovskiy, A. F.; Odintsov, M. G.; Ivleva, S. A.;
Avvakumov, V. I.

Title : Photographic material with constant value of the coefficient of
contrast in the visible part of the spectrum.

Periodical : Zhur. tekhn. fiz., 24, 1499-1502, Aug 1954

Abstract : Notes that photographic materials with constant coefficient of
contrast independent of wave length are needed in solving a number
of problems of spectral analysis and astrophysics. Investigates
the possibility of obtaining such materials. Concludes that the
absolute magnitude of contrast varies but the character of the
dependence of the contrast coefficient, γ , on wave length
remains unchanged. Eight references, 4 USSR (e.g. A. V. Borin,
D. Ya. Martynov, T. I. Smolko, 1952; A. V. Barin, Z. I. Gratsianskaya,
1948).

Institution : --

Submitted : 1 November 1953

BORIN, A.V.

Absorption spectra of dibenzothiocarbocyanine dyes in aqueous gelatin solutions. Zhur.nauch.i prikl. fot. i kin. 1 no.2:111-117 Mr-Apr '56.
(MLRA 9:10)

.(Dyes and dyeing--Chemistry) (Photographic emulsions)

BORIN, A.V.

APPROVED FOR RELEASE: 06/09/2000
USSR/Optics

CIA-RDP86-00513R000206320006-2"

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10662

Author : Borin, A.V., Agatitskoya, V.P.

Inst : Not Given

Title : Effect of Gelatin on the Optical Sensitization of Photographic Emulsions.

Orig Pub: Zh. prikl. khimii, 1956, 29, No 9, 1393-1401

Abstract: No abstract.

Card : 1/1

27
Sensitized silver halide emulsions. A. V. Borin, V. I.
Zelitsman, and A. A. Kondratyuk. USSR, 1972, 217

... of gelatin. In another method, the Ag halide
crystals are coated with an alc. soln. of the sensitizing dyes
taking them from the gelatin soln. in which they were rip-
ened and then dispersed in inert gelatin.

DM

BORIN, A.V.; IVLEVA, S.A.

The synthesis of photographic emulsions using a continuous method.
Zhur. nauch. i prikl. fot. i kin. 2 no. 5:344-348, S-O '57.

(MIRA 10:11)

1. Fabrika kinoplenki, Kazan'.

(Photographic emulsions)

AUTHOR: Borin, A.V., Pobedonostseva, I.A. SOV 77-3-4-4/23

TITLE: A Spectrophotometric Study of Dye Solutions Forming H-aggregates (Spektrofotometricheskoye issledovaniye rastvorov krasiteley, obrazuyushchikh H-agregaty)

PERIODICAL: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, 1958, Vol 3, Nr 4, pp 257 266 (USSR)

ABSTRACT: The author carried out experiments to determine the factors affecting the formation of H-bands in the absorption spectra of solutions of thiocarbocyanine and rhodacyanine dyes. Spirit, water and water-gelatine solutions of the dyes were obtained and subjected to spectrophotometric measurement at intervals of 10 m . The position of the absorption maxima were thus obtained and are set out in graph form. Different dye concentrations and two gelatines were tried out. It was found that the intensity of H-band increases and reaches its maximum value when the concentration of gelatine in the solution is increased. The critical value for the gelatine concentration depends on its degree of aggregation. This might be explained by increased activity of the gelatine micelles and a resultant increase in the concentration of dye which they adsorb. When the gelatine con-

Card 1/2

SOV 77-3-4-4/23

A Spectrophotometric Study of Dye Solutions forming H-aggregates

centration is increased above its critical value, the intensity of the H-band decreases, probably due to an increased concentration of gelatine decomposition products which act as a brake on the adsorption of dye molecules by the gelatine micelles. The displacement of hydrogen from the polymethine chain of thiocarbocyanine dyes, by groups which break up the plane structure of the molecules hinders the formation of dye H-aggregates. Academician A.I. Kiprianov of the Ukraine Academy of Sciences supplied some of the dyes used. There are 11 graphs, 2 tables and 14 references, 9 of which are Soviet, 3 English and 2 French.

ASSOCIATION: Kazan', Filial vsesoyuznogo nauchno-issledovatel'skogo kinofotoinstituta (Kazan', The Branch of the All-Union Research Institute for Photography and Cinematography)

SUBMITTED: July 28, 1956.

1. Thiocarbocyanine dyes--Spectrographic analysis 2. Rhodacyanine dyes--Spectrographic analysis 3. Spectrophotometers--Applications

Card 2/2

PLANE & BOOK EXPLOITATION 80V/4159

Важнейшим изобретением, как 7: Природа фотографической химической промышленности является использование электрических фотоаппаратов.

Opticheskuyu senzitibilizatsiyu i ekspozitsionnuyu. Khimiko-fotograficheskiy obrabotka svetochuvstvitel'nykh sloev (feature of photographic sensitivity, preparation of haloid-silver photographic layers, chemical sensitization and hyper-sensitizing. Chemical-photographic treatment of photo-sensitive layers) Moscow, 1969. 260 p. Russian also inserted. 1,800 copies printed.

Editorial board: K. V. Chibrikov (Resp. Ed.), Corresponding Member, Academy of Sciences USSR, V. I. Babikerov (Deputy Resp. Ed.), Candidate of Chemical Sciences, Dnepropetrovsk, N. B. Gorbunovskiy, Doctor of Chemical Sciences, Professor, O. A. Irodina, Doctor of Technical Sciences, Professor, and I. I. Lavrenko, Candidate of Chemical Sciences, Ed. of Publishing House, K. I. Metelitskiy, Tech. Ed., O. S. Shkiba.

PURPOSE: This collection of articles is addressed to those working in theoretical and applied photogeography and climatology, and to researchers in the climatology and physics of photogeographic processes.

CONTENTS: The collection contains articles from the editorial title of the *Zentralblatt für Bakteriologie*, which deals with problems in the preparation and processing of bioid silver light-sensitive layers, the nature of photoreceptor sensitivity, the permeability of photoreceptor layers, the mechanism of transduction of visual information, the properties of photoresistants, and finally the chemical photographic processes of black-and-white and color photographic materials. Many of the articles contain the results of scientific investigations made by the authors. The collection also includes several reviews of current problems in the theory of chemical-photographic processes. A bibliography of Soviet and non-Soviet references accompanies each article.

OFFICE OF REPRODUCTION AND DISTRIBUTION

Investigation of Concentration Effect During Optical Sensitization of Photographic Emulsions

Polyakov, L. V. Investigation of Interaction of Neodymium With Silver Ions in Solution

ELI'YAH, B.M. Hyperreflexion of Infrathin Films

III. MEDICAL PHOTOGRAPHIC PROCESSING OF IRT FROM SCANS

Bulfin, Th. L. (Decreased). Investigation of Local Effects in Development and Their Effect on the Quality of Working Picture

KHILYLOV, N. I., A. M. TSYBILYANSKY, and N. Ye. KHILLYINA. Investigation of the Stability of Commercial Bleaching Solutions Used in Paper Processes

KILLORY, H. A. A. M. YERASHKOVSKAYA, and H. G. KILLORY.
Distillation of Various Paving Solutions in KNOI Process

Ernest, H. J. and A. M. Zerkowich, and H. Ye. Kirlow.
Investigation of Chemical Aging of a Color Picture on a
Mellinor Film Treated in Various Processes

Amold, T. S. Problems of the Underdevelopment of Multinational
Color Negative

Lizarsbenko, D., and S.A. Shupryn, Problem of Storage of
Developers

ATLANTA: Library of Congress

Case 7/7

JA/12b/ma-⁽²⁾
10-24-60

S/081/62/000/004/059/087
B150/B138

AUTHOR: Borin, A. V.

TITLE: The influence of surface-active substances on the photographic properties of photosensitive films

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1962: 456, abstract 4L417 (Tr. Vses. n.-i. kinofoto-instituta, no. 37, 1960, 117-122)

TEXT: The influence was investigated of octadecenylpolyglycol ester (I) on the photographic properties of ammoniacal bromosilver emulsions. If I is added to the emulsion before spraying on the support, the speed of development is increased and there is an increase in the light-sensitivity of the film and of the efficiency of the optical sensitization. Addition of I to an emulsion containing gold thiocyanate at the beginning of the chemical maturing increases the maximum sensitivity of the photographic film. [Abstracter's note: Complete translation.]

Card 1/1

BORIN, A. V.

Calcium fog. Tekh.kino i telev. 4 no.5:73 My '60.

(MIRA 13:8)

1. Kazanskiy filial Nauchno-issledovatel'skogo kinofotoinstituta.
(Photography--Negatives)

BORIN, A. V., SLESAREVA, V. I.

Investigating the factors affecting the coloration of the photographic film base by optical sensitizers. Tekh.kino i telev. 4
no.5:73-74 My '60. (MIRA 13:8)

1. Kazanskiy filial Nauchno-issledovatel'skogo kinofotoisntituta.
(Motion-picture photography—Films)

BORIN, A.V.; KHARITONOVA, Z.V.; LOGOV, P.I.

Studying the nature of the concentration effect in optical sensitization. Zhur.nauch.i prikl.fot. i kin. 6 no.4:29'-299 J1-Ag '61. (MIRA 14:11)

1. Filial Vsesoyuznogo nauchno-issledovatel'skogo kinofotoinstituta, Kazan'.

(Photographic sensitometry)

S/058/63/000/003/042/104
A062/A101

AUTHORS: Akhmedzyanov, M. A., Slesareva, V. I., Khaykin, M. S., Kukhtin, V. A., Borin, A. V.

TITLE: About the influence of some antioxidants on the photographic properties and conservation of emulsion layers

PERIODICAL: Referativnyy zhurnal, Fizika, no. 3, 1963, 84, abstract 3D575
("Tr. Vses. n.-i. kinofotoin-ta", 1962, no. 46, 31 - 35)

TEXT: A study was made on the influence of some derivatives of polyphenols and hydrazine on the photographic properties and conservation of sensitized emulsion layers. It was found that phenylhydrazone of glucose and phenylglucosazone contribute to improve the conservability of sensitized light-sensitive layers. There are 12 references.

[Abstracter's note: Complete translation]

Card 1/1

BORIN, A.V.; LOGAK, P.I.; TELYAKOVA, V.Sh.; MISHAKOVA, M.V.

Investigating the factors influencing the concentration effect
in optical sensitization. Zhur.nauch.i prikl.fot.i kin. 7
no.4:245-251 J1-Ag '62. (MIRA 15:8)

1. Filial Vsesoyuznogo nauchno-issledovatel'skogo kinofoto-
instituta, Kazan'.
(Photographic emulsions)

h2199

S/051/62/013/004/020/023

E039/E491

3.032

AUTHORS: Meyklyar, P.V., Shvarts, V.M., Kharitonova, Z.V.,
Borin, A.V., Ryskina, S.I., Siletskaya, N.V.

TITLE: Photographic films for spectroscopy and astronomy

PERIODICAL: Optika i spektroskopiya, v.13, no.4, 1962, 607-609

TEXT: Recent work at the Kazanskiy filial Vsesoyuznogo nauchno-issledovatel'skogo kinofotoinstituta (Kazan' Branch of the All-Union Scientific Research Institute on Cinemaphotography) has been aimed at increasing the sensitivities of photographic films for long exposures and of infrachromatic films. Films having greater sensitivity were developed for long exposures in the near ultraviolet region and for different regions of the infrared up to 1050 mμ. Films for the visible region are designated by the letter A (Astronomy) and a number corresponding to the wavelength for which the sensitivity is a half of the maximum and on the long wavelength side. This film is manufactured at the Kazanskiy khimicheskiy zavod (Kazan' Chemical Works). Films for the infrared region are designated by a number corresponding to its maximum sensitivity. Spectral sensitivity
Card 1/3

Photographic films ...

S/051/62/013/004/020/023
E039/E491

curves of films A-500, A-600, A-650, A-660 and A-700 are given. In the table the sensitivity of these films is compared with a corresponding Kodak film. The sensitivities are compared at 400 mμ for the non-sensitized film and at maximum sensitivity for the remaining film. Spectral sensitivity curves are also given for I-740 (I-740), I-810 (I-810), I-900 (I-900), I-1050-1 (I-1050-1) and I-1050-11 (I-1050-11) films. The sensitivity of I-1050-1 and I-1050-11 can be significantly increased by the method of hypersensitization described by S.M.Solov'yev (Fotografirovaniye v infrakrasnykh luchakh - Photography in infrared rays - Izd. "Iskusstvo", M., 1957). An infrachromatic film A-850 is also manufactured which is sensitive up to about 900 mμ. The density of background fogging for all these films does not exceed 0.3. The films should be stored at 2 to 4°C since storage of films for use in the visible region causes an increase in fogging and in the case of infrachromatic films there is a decrease in sensitivity. The gamma of the described films lies in the range 2.0 to 3.0. There are 3 figures and 1 table.

SUBMITTED: May 17, 1962
Card 2/3

Photographic films ...

S/051/62/013/004/020/023
E039/E491

No.	Compared types		$\frac{S_{\text{Kazan' film}}}{S_{\text{Kodak}}}$
	Kazan' film	Kodak	
1	A-500	Oa O	1.8
2	A-650	Oa C	7.0
3	A-660	Oa E	6.0
4	A-700	Oa F	7.0

Abstracter's note: This is an abridged translation.

Card 3/3

BORIN, A.V.; MOSHKINA, T.M.; MISHAKOVA, M.V.; SHAYMARDANOVA, L.R.

Sensitizing effect of some polyethylene glycols. Zhur. nauch.
i prikl. fot. i kin. 8 no.3:211-212 My-Je '63. (MIRA 16:6)

1. Filial Vsesoyuznogo nauchno-issledovatel'skogo kinofoto-
instituta, Kazan'.
(Glycols) (Photographic emulsions)

GOROKHOVSKIY, V.M.; KUKHTIN, V.A.; LEVIN, Ya.A.; BORIN, A.V.; KISELEVA, I.P.;
VARZANOSOVA, T.P.

Studying the stabilizing effect of some derivatives of 1,3,4 -
triazaindolizine. Trudy NIKFI no.46:26-30 '62.

(MIRA 18:8)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206320006-2

AKHMEZDYANOV, M.A.; SIESAREN, V.I.; LEVIN, Ya.A.; BORIN, A.V.
Effect of some antioxidants on the photographic properties and
keeping quality of emulsion layers. Trudy NIKFI no.46:31-35 '62.

(MIRA 18:8)

BORIN, A.V.; KHARITONOVA, Z.V.

Investigating the effect of superoptimum concentrations of the optical sensitizer on the photographic properties and regression of the latent image. Trudy NIKFI no.46:96-100 '62.

(MIRA 18:8)

MEYKLYAR, P.V.; SHVARTS, V.M.; BORIN, A.V.; RYSKINA, S.I.; SILETSKAYA,
N.V.

Photographic films for use in spectroscopy and astronomy
developed by the Kazan Branch of the Motion Picture and
Photography Scientific Research Institute. ~~Institute~~. 'hur. prikl.
spekt. 3 no.1:99-101 JI '65. (MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut, Moskva.

BORIN, A.V.

Effect of supraoptimal dye concentration on the photographic properties of emulsion layers; observations in connection with the article by A.S. Heinman, S.V. Natanson and V.P. Doratova. Zhur. nauch. i prikl. fot. i kin. 9 no.3:215-216 My-Je '64.
(MIRA 18:11)

BORIN, B.

Birth of a profession. Znan.sila 35 no.4:29-32 Ap '60.

(MIRA 13:8)

(Automatic control) (Mechanics (Persons))

BORIN, Boris

We from Sormovo.... Znan.sila 35 no.9:3-5 8 '60.
(Gorkiy--Technical education)

(MIRA 13:10)

BORIN, Boris

Art of the glass blower. Znan.sila 35 no. 11:26-28 N '60.
(MIRA 13:12)

(Glass blowing and working)

BORIN, Boris

Master of a fire stream. Znan.sila 36 no.3:39-41 Mr '61.

(Metallurgical furnances)

(MIRA 14:3)

BORIN, Boris

Five days on the admission committee. Znan-sila 37 no.12:6-7
D '62. (MIRA 16:2)

(Building as a profession)

(AT THE END OF EACH PAGE)																	
PAGES AND PROPERTIES INDEX																	
<div style="position: relative; height: 100%;"> BC <div style="position: absolute; top: 10px; right: 10px; font-size: 1.5em; font-weight: bold;">B-I-4</div> <p style="margin-top: 100px;">Heat-treatment of alloys of the aldry type. F. A. ROSEN, A. A. BOCHVAR, I. P. VELICHKO, K. V. GOREV, and M. O. KUMAROV (Trav. Met., 1962, No. 12, 61—108).—Al-Mg-Si alloys containing Si 0.3—0.9, Mg 0.33—1.54, and Fe 0.2—0.3% have been studied. Excess of Si improves the mechanical properties of alloys low in Mg/Si; 0.5% excess of Si improved those of all the alloys studied. Quenching from 525° followed by tempering at 140—150° for < 48 hr. is recommended. In alloys containing 0.4—0.9% Mg an excess of 0.4—0.5% Si over that required for formation of Mg₂Si is recommended.</p> <p style="text-align: right; margin-right: 50px;">Ch. Ann.</p> </div>																	
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																	
E-Z																	
FROM STUDENT																	
DATE																	
REMARKS																	
LIBRARY ONE ONLY LIST																	
LIBRARY TWO ONLY LIST																	
LIBRARY THREE ONLY LIST																	
LIBRARY FOUR ONLY LIST																	
LIBRARY FIVE ONLY LIST																	
LIBRARY SIX ONLY LIST																	
LIBRARY SEVEN ONLY LIST																	
LIBRARY EIGHT ONLY LIST																	
LIBRARY NINE ONLY LIST																	
LIBRARY TEN ONLY LIST																	
LIBRARY ELEVEN ONLY LIST																	
LIBRARY TWELVE ONLY LIST																	
LIBRARY THIRTEEN ONLY LIST																	
LIBRARY FOURTEEN ONLY LIST																	
LIBRARY FIFTEEN ONLY LIST																	
LIBRARY SIXTEEN ONLY LIST																	
LIBRARY SEVENTEEN ONLY LIST																	
LIBRARY EIGHTEEN ONLY LIST																	
LIBRARY NINETEEN ONLY LIST																	
LIBRARY TWENTY ONLY LIST																	
LIBRARY TWENTY ONE ONLY LIST																	
LIBRARY TWENTY TWO ONLY LIST																	
LIBRARY TWENTY THREE ONLY LIST																	
LIBRARY TWENTY FOUR ONLY LIST																	
LIBRARY TWENTY FIVE ONLY LIST																	
LIBRARY TWENTY SIX ONLY LIST																	
LIBRARY TWENTY SEVEN ONLY LIST																	
LIBRARY TWENTY EIGHT ONLY LIST																	
LIBRARY TWENTY NINE ONLY LIST																	
LIBRARY THIRTY ONLY LIST																	

1ST AND 2ND ORDERS		PROCESSES AND PROPERTIES INDEX	
<p>*Determination of Upper Critical Points in Antifriction Alloys. F. A. Borin and A. A. Botchvar (<i>Lezgins Metals (The Non-Ferrous Metals)</i>, 1933, (2/3), 101-106; C. Abs., 1934, 20, 4253).—[In Russian.] The "upper critical points" (the minimum temperatures of quenching at which no separation of hard crystals from liquid metal occurs) were determined for several Babbitt metals by microscopic examination of specimens quenched in copper moulds. In all cases the critical points were found to be higher than the values given in the literature.—R. G.</p>			
COMMON ELEMENTS		COMMON VARIANTS	
MATERIAL INDEX		EXPERIMENTAL INDEX	
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>			
1ST ORDER		2ND ORDER	
3RD ORDER		4TH ORDER	

COMMON ELEMENTS																										PROCESSES AND PROPERTIES INDEX																									
COMMON ELEMENTS																										PROCESSES AND PROPERTIES INDEX																									
BC																										B-I-C																									
<p>Search for new high-grade alloys with a copper or aluminum base. P. A. Bogus and J. P. Valitschenko (Trav. Metal. 1986, No. 2, 103-108).—A series of pseudo-binary alloys with Al or Cu as a base and Mg, Si, Ni, Bi, Mg, etc. as addition compounds were prepared, heat-treated, and tested for hardness. In each case the hardness was increased by the additions.</p> <p>Ch. Ann. (c)</p>																																																			
<p>ASM-A METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			
<p>COMMON ELEMENTS</p>																																																			
<p>COMMON ELEMENTS</p>																																																			

LIST AND INDEX ORDERS																										PROCESSES AND PROPERTIES INDEX																									
<p>ca</p>																										<p>9</p>																									
<p>INFLUENCE OF DISPERSION OF METALLIC PARTICLES IN ALLOYS ON THEIR SOLUBILITY IN ACIDS. B. A. HORN. <i>Trudy Metal.</i> 1937, No. 9, 94-9. A review of previous investigations has shown that the rate of solution in acids decreases with decreasing size of components with some eutectic alloys, and increases with others. In order to clarify this apparently contradictory behavior of alloys B. investigated the relation between the grain size obtained by cooling at various rates, and the sol. in acids of the following eutectic alloys: Pb-Sb, Pb-Ag, Pb-Cd, Zn-Sn and Cu-Ag. The results indicated that the alloys can be divided into 2 groups: In group one, Pb-Sb and Pb-Ag, the soln. rate increases with decrease in grain size. In these alloys, components of higher electrochem. potential are subject to greater dispersion. This results in the lowering of the potential of the alloy, in the increase of the no. of active electrolytic cells and in lowering of the H overvoltage on the cathodes. The soln. rate of the Pb-Cd alloy was found to be independent of the degree of dispersion of the components. Alloys of group two, Zn-Sn and Cu-Ag, showed a decreased soly. with decreasing particle size; this is thought to be due to the fact that in these alloys the less noble component is more finely dispersed; access of fresh acid is hindered by gaseous films in narrow channels formed by the soln. of the less noble component, and by redeposition of the more noble component. B. N. D.</p>																																																			
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																										<p>12</p>																									

1ST AND 2ND ORDERS		PROCESSING AND PROPERTY INDEX	
<p>17</p> <p>*Investigation of New Age-Hardening Alloys. 1.—[Improvement of Beryllium-Copper Alloys.] F. A. Borin and I. P. Velichenko (<i>Sbornik Nauch. Trud. Moskov. Inst. Tsvetnykh Met. Zol.</i>, 1933, (5), 4-21; <i>Khim. Refrat. Zhur.</i>, 1934, 1, (11/12), 96; <i>C. Abs.</i>, 1939, 33, 9250).—[In Russian.] The effect of admixtures on copper-beryllium alloys containing 1-5% beryllium was determined. The alloys were annealed at 750-850° C. and then kept at 250°-600° C. for 2-3 hrs. The maximum effect of the addition of zinc on the hardness of the alloy was obtained with a 10% zinc content. Addition of manganese up to 5% increases the ageing effect; this is reduced on further increase of the manganese content. A very small effect was observed from the addition of cobalt. Optimum thermal treatment of semi-finished products obtained under plant conditions from copper alloys containing beryllium 1-5 and cobalt 0-3% consisted of annealing at 800°-825° C., quenching in cold water, and keeping at 320°-325° C. for 2-3 hrs. Their mechanical properties were: $\delta = 135-140$ kg./mm.² with an elongation of 1-2%, modulus of elasticity 14,350-15,200 kg./mm.². From nickel-copper-beryllium alloys (No. 1 with beryllium 1-47, copper 18-5%, and No. 2, beryllium 1-58 and copper 27-83%) strip was obtained by cold rolling. The optimum thermal treatment was annealing at 1000° C., quenching in cold water, and keeping at 450° C. for 0-12 hrs. The mechanical properties were: No. 1, $\delta = 173$ kg./mm.², relative elongation 8%; No. 2, $\delta = 188$ kg./mm.²; relative elongation 6%. The tensile strength and relative elongation of both alloys were higher than for the binary nickel-beryllium alloy with beryllium 20%, produced under similar conditions. Alloys of this type are corrosion-resistant.</p>			
ASB-51A METALLURGICAL LITERATURE CLASSIFICATION			
1ST AND 2ND ORDERS		1ST AND 2ND ORDERS	

1ST AND 2ND ORDERS																									
1ST ORDER													2ND ORDER												
1ST ORDER													2ND ORDER												
<p>The Capacity of Metallic Phases for Coagulation and Spheroidization [in Aluminum Alloys]. F. A. Bogin (Sbornik Nauch. Trudov Moskov. Inst. Tsvet. Metallur. i Zolota (Coll. Sci. Works Moscow Inst. Non-Ferrous Metals and Gold), 1942, (8), 62-66; Khim. Referat. Zhur., 1941, 6, (3), 17; C. Abn., 1943, 37, 3718).—[In Russian.] The crystallization of intermetallic phases in multi-component alloys in the form of plates among the grains decreases considerably the plasticity of the alloys, whereas their spheroidization and coagulation on addition of new components to the alloy or on annealing improves the plastic properties. The microstructures of aluminum alloys containing, respectively, copper 8, silicon 8, silicon 13, Mg₂Si 3, iron 3, and manganese 3%, were studied in the quenched state and after annealing for 1-20 Hrs. The intermetallic phases spheroidize the more easily the greater their solubility in aluminum and the greater the difference between the solubilities at high and at low temperatures. The decisive role in the spheroidization process is played, not by surface tension, but by the solution and redeposition of phases, which is due to the varying solubilities of the different phases. The intermetallic crystals which do not dissolve in the solid phase can change their form only by decomposing under the influence of thermal stresses. In such cases thermal treatment does not insure a complete change of the form of the separated phases.</p>																									
<p>ALB-11 A METALLURGICAL LITERATURE CLASSIFICATION</p>																									

Category : USSR/Solid State Physics - Mechanical properties of crystals and poly- E-9
 crystalline compounds

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 1377

Author : Borin, F.A., Sollertinskaya, Ye.S.

Inst : Moscow Inst. for Nonferrous Metals and Gold, USSR

Title : Influence of Zirconium on Certain Properties of Magnesium Alloys

Orig Pub : Metallovedeniye i obrabotka metallov, 1956, No 2, 8-13

Abstract : An investigation was made of the effect of Zr on the mechanical properties grain size, and corrosive properties of Mg-Zr and Mg + 4.1 — 4.8% Zn + Zr alloys. It is shown that Zr increases considerably the mechanical properties of the die-cast Mg-Zn-Zr alloys and the corrosion resistance of Mg-Zr alloys. A refining action by zirconium on the magnesium alloys is noted.

Card : 1/1

Effect of zirconium on several properties of magnesium

B. S. Solov'yev (M. I. Kaluzhnik)

It is shown that the addition of zirconium to magnesium leads to a decrease in the rate of corrosion in a 10% solution of sodium chloride. The percentage of zirconium in the alloy is 0.2% and 0.5%. The percentage of zirconium in the alloy is 0.2% and 0.5%.

at a 1% Zr to a max. of 20 at 0.5% Zr. The percentage of zirconium in the alloy is 0.2% and 0.5%.

at this value. Prolonged hot-hardness tests gave results corresponding to the rupture-test results. There was scatter in the high-temp. strength values obtained on hot-pressed Mg-Zn-Zr alloys because of the interference of the Zr with recryst. of these alloys. Hot-pressed Mg-Zr alloys had high-temp. strengths similar to those of the cast alloys. Compared to an alloy contg. 6% Ce, 4.16 Zn, 0.00 Zr, and 0.028 Fe, the high-temp. strengths of the Zr alloys were relatively poor. The corrosion resistance was good from the vol. of H₂ liberated from aq. NaCl solns. at 28°. Zr 0.67% decreased the rate of corrosion to 1/10 the original value and was more effective in Mg-Zr than in Mg-Zn-Zr alloys. However, the corrosion resistance was poorer than that of the standard Mg-Zn-Al alloys. The action of Zr in removing Fe from Mg alloys was only part of the reason for the beneficial effect of Zr on corrosion resistance, since the Fe content was reduced to a min. value when only 0.1 to 0.3% Zr was present, while the corrosion resistance continued to improve with further increase in Zr. The Zr alloys did not crack under simultaneous stress and corrosion.

A. G. Guy

2/2
had
prob

AUTHORS: Borin, F.A., Korol'kov, G.A., Chernomordin, I.F. 32-12-48/71

TITLE: The Construction of a Heater for a High-Temperature Laboratory
Piston Furnace (Konstruktsiya nagrevateley dlya laboratornoy
vysokotemperaturnoy pechi kalbochnogo tipa).

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 12, pp. 1510-1511 (USSR)

ABSTRACT: In this paper an improved type of the already previously recommended
laboratory piston furnace is described. The improvement consists
mainly in the fact that the heater is exchangeable. This heater is
made from a tungsten-, molybdenum-, niobium-, or tantalum sheet,
which forms a cylinder; deep incisions are made on one edge of this
cylinder in such a manner that the points formed in this way, when
bent towards the inside, form the bottom of the cylinder. This bot-
tom is hemmed in between two molybdenum disks of about 2 mm thick-
ness (from the interior of the cylinder as well as from the out-
side). A square molybdenum rod (average 15 x 15 mm), which rests
upon a copper plate, is used as a support. By means of two molybde-
num bolts the bottom of the cylinder (including the disks), the
molybdenum block, and the copper plate which is connected with the
carrier of the furnace, are firmly drawn together. The electric line

Card 1/2

The Construction of a Heater for a High-Temperature
Laboratory Piston Furnace

32-12-48/71

is here enclosed in a protective tube. In its upper part the heater is fastened to a rail by means of two pairs of clamps; the rail is vertical and parallel to the walls of the heater, and forms an arc at the top. By this rail the current is fed to the upper edge of the heater. Between the aforementioned pairs of clamps on this rail a molybdenum protective shell is, at the same time, fastened, which rests against the vertical parts of the arc. Another construction of the heater is suggested, which is, in principle, similar to that described above, with the only difference that in this case the cylindrical heater is replaced by a spiral made of the same material, which is fastened in a suitable manner. In this case the protective case has no incisions and is drawn over the arc in such a manner that it is fastened to the only pair of clamps which fastens the upper end of the heating spiral to the arc. There are 2 figures.

ASSOCIATION: Moscow Institute for Nonferrous Metals and Gold imeni M.I.Kalinin
(Moskovskiy institut tsvetnykh metalov i zolota im.M.I.Kalinina).

AVAILABLE: Library of Congress

Card 2/2 . 1. Furnaces-Heater elements 2. Furnaces-Improvement

18.12.85

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 14, p 110 (USSR)
 66943
 SOV/123-59-14-55260

AUTHORS: Borin, F.A., Korol'kov, G.A.

TITLE:

PERIODICAL:

ABSTRACT:

Preparing Titanium - Zirconium Alloys and Investigating Their Structure

Sb. nauchn. tr. Nauchno-tekhn. o-vo tsvetn. metallurgii, Mosk. in-t
 tsvetn. met. i zolota, 1958, Nr 29, pp 101 - 107

For the manufacture of Ti - Zr alloys a laboratory retort furnace with heaters made of sheet and rod material was used. Both these designs ensured a temperature of some 2,000°C in vacuum. The structure of the alloys, obtained by sintering metal-ceramic specimens and cast alloys, was investigated. The melting of the sintered specimens was carried out in a vacuum arc furnace with tungsten electrode, the power supply of the laboratory retort furnace from a 12 - 20 kva step-down transformer, the current in the secondary winding was 300 - 600 amp at a voltage of 4 - 6 v. Sintering of the briquets consisted of two stages. The briquets were heated up to 400 - 500°C to attain a maximum degasification, then, after the subsequent increase of the vacuum, the temperature rose to 1,200 - 1,400°C. The specimens were soaked at this temperature

Card 1/2

66949

SOV/123-59-14-55260

Preparing Titanium - Zirconium Alloys and Investigating Their Structure

for 4 - 5 hours. The specimens obtained possessed only an insignificant porosity and a coarsely acicular structure. A variation in the cooling rate of the specimens did not result in noticeable structural changes. In a cast state the alloys showed a finely acicular structure. The micro-structure of the hardened alloy represents a fine acicular decomposition structure where the configuration of boundaries of the decomposed phase is preserved. Six figures, six references. ✓

B.V.N.

Card 2/2

80V/123-59-15-59751

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 15, pp 121 - 122 (USSR)

AUTHORS: Borin, F.A., Ivliyeva, M.P.

TITLE: On the Recrystallization of Aluminum and Its Alloys With Zirconium and Magnesium

PERIODICAL: Sb. nauchn. tr. Nauchn.-tekhn. o-vo tsvetn. metallurgii, Mosk. in-t tsvetn. met. i zolota, 1958, Nr 29, pp 125 - 134

ABSTRACT: Al of 99.99% and 99.97% purity was taken for the investigations as well as alloys of Al with 1 and 3% of Mg, and Al with 0.01, 0.1, 1 and 2% of Zr. The specimens were deformed by 4 - 92% and annealed at temperatures from 100 - 600°C. Microsections were made of the specimens on which, after etching, the average size of grain was determined. The crystal size of Al of 99.97% purity recrystallizing at a temperature of 600°C after the critical deformation amounted to 1,600 μ , that of Al of 99.99% purity to 2,400 μ . The critical degree of deformation for all alloys was 4%. Admixtures of Zr and Mg also contributed the more to a reduction in the size of the recrystallized grain, the greater the quantities of

Card 1/2

SOV/123-59-15-59751

On the Recrystallization of Aluminum and Its Alloys With Zirconium and Magnesium

admixtures. The effects of Zr are greater than those of Mg. The behavior of alloys with 1% Zr content is abnormal, as they possess a second maximum on their recrystallization curves at a deformation of 92%. Very small admixtures make the temperature of recrystallization increase considerably. The deformation of Al practically has no effect on the electric conductivity, which shows that in pure Al the phenomenon of regression takes place during the process of deformation or, at normal temperatures, after deformation. 8 figures, 3 references.

P.S.M.

Card 2/2

BORIN, I. I.

PHASE I BOOK EXPLOITATION

SOV/4550

Mal'tsev, Mikhail Vasil'yevich, Professor, Doctor of Technical Sciences,
Tamara Aleksandrovna Barsukova, and Fedor Andreyevich Borin, *Docent, Cand. Technical Sci.*

Metallografiya tsvetnykh metallov i splavov; s prilozheniyem atlasa makro-
i mikrostruktur (Metallography of Nonferrous Metals and Alloys, Including an
Atlas of Macrostructures and Microstructures) Moscow, Metallurgizdat, 1960.
372 p. 5,200 copies printed.

General Ed.: M.V. Mal'tsev, Professor, Doctor of Technical Sciences;
Reviewers: A.F. Golovin, Professor, A.F. Usov, Candidate of Technical Sciences;
Ed.: Ye. S. Shpichinetskiy; Ed. of Publishing House: O.M. Kamayeva; Tech. Ed.:
Ye. B. Vaynshteyn.

PURPOSE: This book is intended for use as a textbook by students at metallurgical
institutes. It can also be useful to workers in metallurgical laboratories at
factories and scientific research institutes.

COVERAGE: The authors describe the structures, properties, and uses of commercial
nonferrous metals and alloys. The structures of the more typical alloys are
illustrated in photographs which have been incorporated into an atlas. The atlas

Card 1/6

(for use) Chain of metal studies, Moscow Inst. Nonferrous Metals & Alloys in M. S. Kalinin

Metallography of Nonferrous Metals (Cont.)

SOV/4550

can serve as a manual for analyzing the structural composition of various light-metal alloys. The book was written by instructors at the Department of Physical Metallurgy of the Moskovskiy institut tsvetnykh metallov i zolota im. M. I. Kalinina (Moscow Institute of Nonferrous Metals and Gold imeni M.I. Kalinin). Subsection 1, Section 2, of Chapter V (Antifriction alloys) was written by F.A. Borinyy, Docent, Candidate of Technical Sciences. Subsection 1, Section 3, of Chapter I (Tin bronzes) was compiled by T.A. Parsukova, Docent, Candidate of Technical Sciences. Subsections 2-5, Section 3, of Chapter I (Aluminum bronzes, lead bronzes, silicon bronzes, manganese bronzes) were written by M.V. Mal'tsev in collaboration with T.A. Barsukova. The remaining chapters of the book were written by M.V. Mal'tsev, who also did the general editing of the book. Laboratory worker V.D. Rodionenko helped in preparing the photographic illustrations included in the Appendix. The authors thank A.A. Bocharov, Academician; I.I. Novikov, Docent, Candidate of Technical Sciences; and the reviewers, V.F. Golovin, Professor, General-Major of Corps of Engineers; A.F. Usov, Docent, Candidate of Technical Sciences; Ye. V. Panchenko, Docent, Candidate of Technical Sciences; and B.I. Krimer, Docent, Candidate of Technical Sciences, for their assistance in compiling this book. There are 80 references: 78 Soviet and 2 English.

Card 2/6

NOVIKOV, Il'ya Izriellovich; ZAKHAROV, Mikhail Vasil'yevich. Primal
uchastiye BORIN, F.A., dots.; DOBATKIN, V.I., doktor tekhn.
nauk, retsenzent; Primal uchastiye VISHNAYKOV, D.Ya., prof.,
doktor tekhn. nauk; ARKHANGEL'SKAYA, M.S., red. izd-va; KARASEV,
A.I., tekhn. red.

[Heat treatment of metals and alloys]Termicheskaya obrabotka me-
tallov i splavov. Pod obshchei red. I.I.Novikova. Moskva, Me-
tallurgizdat, 1962. 429 p. (MIRA 15:12)
(Metals--Heat treatment)

BORIN, G.I., inzh.; FAL'CHENKO, N.V., inzh.

Automatic devices for stopping presses in precise press-
fitting of parts. Mashinostroenie no.1:12-14 Ja-F '63.
(MIRA 16:7)

1. Luganskiy teplovozostroitel'nyy zavod.
(Power presses)
(Electric controllers)

BORIN, Ivan Andreovich; BASMANOV, V., otv. red.; FILIPPOVA, E.,
red.; TELEGINA, T., tekhn. red.

[How we struggle for increasing accumulations] Kak my bo-
remsia za uvelichenie nakoplenii; iz opyta raboty zavoda
"Elektrostal'" im. I.F.Tevosiana. Moskva, Gosfinizdat,
1963. 63 p. (MIRA 16:7)

1. Glavnyy bukhgalter zavoda "Elektrostal'" im.I.F.
Tevosyana (for Borin).
(Electrostal'--Steel industry--Management)

VLASOV, Aleksey Fedorovich; GAMARNIK, Yevgeniy Yefimovich; BORIN,
Ivan Sergeyevich; KONONOV, D.R., red.

[Drying foundry molds and cores by means of infrared gas
burners] Sushka liteinykh form i sterzhnei gazovymi go-
relkami infrakrasnogo izlucheniia. Leningrad, 1964. 20 p.
(MIRA 17:11)

BORIN, K., kand.sel'skokhozyaystvennykh nauk, Geroy Sotsialisticheskogo
Truda

Why is it possible for a dwarf to stop a giant? Tekh.mol. 31
no.2:26 '63. (MIRA 16:6)
(Agricultural machinery)

BORIN, K

Socilist Farming. Moscow, Formlism Crusades Publ., 1939.

31 P.

BORIN, K.

Machine-Tractor Stations

Role of the trailer-operator in improving tractor work. Kolkh. proizv.,
12, No. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June _____ 1953, Uncl.
2

New equipment in agriculture in the U.S.S.R.

S405.V822 no. 40 1953

1. Farm mechanization.

BORIN, Konstantin Aleksandrovich.

New equipment in agriculture in the USSR Moskva, Znanie, 19~~8~~4. 31 p. (Vsesoiuznoe obshchestvo po rasprostraneniu politicheskikh i nauchnykh znani. Ser. 5, no. 40) (54-29126) ii

HD9085.R9V8 no. 40

1. Farm mechanization

BORIN, K., geroy Sotsialisticheskogo Truda, laureat Stalinskoy premii.

Captains of "steppe ships." Tekh.mol. 22 no.10:18-23 0 '54.
(MIRA 7:11)

1. Aspirant Sel'skokhozyaystvennoy akademii im. K.A.Timiryazeva.
(Combines (Agricultural machinery))

BORIN, K. A.

6747. Borin, K. A. Novaya Tekhnika v sel'skom khozyaystve SSSR.
Alma-ata, kazgosizdat, 1954. 43 s. 20 sm. (o-vo po rasprostraneniyu
polit. I Nauch. znaniy Kazakh. SSR). 10.000 ekz. 80 K. -- Nakazakh.
yaz. -- (55-2214) 631.3 & 636.0025

SO: Knizhnaya Letopis' No. 6, 1955

BORIN, K. A.

"High-Production Work on Tractor-Pulled Combines." (Dissertation for Degree of Candidate of Agricultural Sciences) Moscow Order of Lenin Agricultural Academy imeni K. A. Timiryazev, Moscow, 1955

SO: M-1036 28 Mar 56

BORIN, K.A., kandidat sel'skokhizyaystvennykh nauk, Geroy Sotsialisticheskogo
Truda, laureat Stalinskoy premii.

Urgent tasks of the agricultural machinery industry. Izobr.v
SSSR 2 no.5:13-16 My '57. (MLRA 10:7)
(Agricultural machinery industry)

30(11)
AUTHOR:

Borin, K., Former Combine Driver,
Candidate of Agricultural Sciences, Hero of Socialist Work

SOV/29-59-2-34/41

TITLE:

Soviet Man Will Create an Agricultural Technology Allowing to
Increase Productivity Ten Times (Sovetskiy chelovek sozdast
agrotekhniku, kotoraya pozvolit udesyaterit' urozhaynost')

PERIODICAL:

Tekhnika molodezhi, 1959, Nr 2, p 37 (USSR)

ABSTRACT:

To the question raised by the editors of the periodical
"Tekhnika - molodezhi" how he imagined future to be K. Borin
answered: "First of all, I think the harvest will be indepen-
dent of the moods of weather. The gathering in of the crop in
any weather seems to me especially important. The grain will
be gathered in not with complicated and clumsy combines but
with universal grain reapers provided with devices for any
harvest conditions. The grain reaped will immediately be trans-
ported to a mechanized threshing-floor. This will be an
automatic unit line for grain processing. The drying unit will
convey the dry ears of grain to the thresher. The threshing
will be done in 2-3 phases to spare the grains. The cleaning,
sorting, calibrating, and unloading of grain will be done by
simple and clever electric machines. Most promising and

Card 1/2

Soviet Man Will Create an Agricultural Technology
Allowing to Increase Productivity Ten Times

SOV/29-59-2-34/41

interesting, however, will be the charging of the seed and the sowing. On the threshing-floor, a special machine will press a continuous band of straw and sow the selected corn on this band, manure every single cell and roll the finished seed together. At the time of sowing, these rolls will be spread by machines over the field and covered with ground. Thus, the Soviet people will - following the laws of nature - create the best agricultural technology which will permit to increase the productivity of agriculture 10 times and to supply the country with abundance of foodstuffs." There is 1 figure.

Card 2/2

BORIN, K., Geroy Sotsialisticheskogo truda, kand. sel'skokhozyaystvennykh nauk

Young naturalists ought to have technical skills. IUn. nat. no.10:9
0 '59. (MIRA 13:2)

(Farm mechanization)

BORIN, K., kand.sel'skokhozyaystvennykh nauk, Geroy Sotsialisticheskogo
Truda.

Mechanizers are "for it". Tekh.mol. 28 no.1:2 '60.

(Agricultural machinery)

(MIRA 13:5)

STEPANOV, S.I.; BORIS, L.I.

Influence of errors in initial data on the accuracy of a
solution of boundary value problems of tide equations. Trudy
Len. gidromet. inst. no.17:167-186 '64. (MIRA 18:6)

BORIN, R.

Journey to the land of invisible things. Znan.sila 35 no.6:43
Je '60. (MIRA 13:7)
(Microscope)

SYSOYEV, M.I., kand.tekhn.nauk; BORIN, V.N., inzh.

Methodology for testing the internal insulation of pressurized
apparatus. Vest. elektroprom. 33 no.8:50-55 Ag '62. (MIRA 15:7)
(Electric power distribution—Equipment and supplies)

KAGAN, D.Ya.; GRINZAYD, I.I.; BORIN, V.V.

Softening and the recovery of properties of a KhN80T-type alloy.
Fiz. met. i metalloved. 12 no.6:908-911 D '61. (MIRA 16:11)

S/126/61/012/006/016/023
E021/E535

AUTHORS: Kagan, D.Ya., Grinzayd, I.I. and Borin, V.V.
TITLE: Softening and restoration of the properties of
X480T (KhN80T) type alloy
PERIODICAL: Fizika metallov i metallovedeniye, v.12, no.6, 1961,
908-911

TEXT: The aim of the present work was to investigate the restoration of the initial properties in softened alloys of the type KhN80T and to study the kinetics of the processes of softening and restoration. Specimens were given a standard heat treatment (quenched from 1080°C and aged at 750°C for 16 hours). They were then softened at 800, 850, 900 and 1000°C and the softened samples were restored by additional heating at 750°C. Hardness, long-term strength and short-time mechanical properties were studied. Phase analysis and microstructural examinations were carried out. The values of hardness and the quantity of the strengthening α' -phase decrease with increase in time held at any one temperature. At about 900°C, the alloy is completely softened. If the softened alloy is again heated at 750°C, the

Card 1/2

Softening and restoration of ...

S/126/61/012/006/016/023
E021/E535

original properties are restored and the amount of α' -phase is also restored to a constant value of 9 - 10% (the original quantity was 11.5%). Since phase analysis showed a continuous decrease in quantity of α' -phase with increase in temperature, it follows that softening occurs because of dissolution of the finely dispersed α' -phase. The original properties of the alloy are restored by precipitation of this phase. There are 3 figures and 2 tables.

SUBMITTED: January 9, 1961 (initially)
 July 14, 1961 (after revision)

Card 2/2

BORIN, Ya.V., prof.; OL'GINA, F.P., dotsent; GRUSHKO, N.Ya.; LYASHKEVICH,
A.S.; KUCHERAK, I.S.

Hemodynamic shifts in workers of the Kalush potassium combine.
Vrach. delo no.11:104-107 N'63 (MIRA 16:12)

1. Kafedra Gospital'noy terapii (zav. - prof. Ya.V.Borin)
Ivano-Frankovskogo meditsinskogo instituta.

BORIN, Ya. V.

Gastric juice ferments and their clinical significance in
chronic gastritis. Klin. med., Moskva 29 no.7:85 July 1951.
(CLML 20:11)

1. Of the Clinic of Hospital Therapy (Head -- Ya. V. Borin),
Stanislav Medical Institute.

BORIN, Ya.V., professor; MASIK, M.G., dotsent

Some problems in the clinical aspects and pathogenesis of subacute
septic endocarditis. Vrach.delo no.7:673 J1 '57. (MIRA 10:8).

1. Klinika gosspital'noy terapii (zav. - prof. Ya.V.Borin)
Stanislavskogo meditsinskogo instituta
(ENDOCARDITIS)

BORIN, Ya.V., prof.

Some problems in the clinical aspects and treatment of diseases
of the joints. Vrach.delo no.2:203 F '59. (MIRA 12:6)

1. Kafedra gospi'tal'noy terapii (zav. - prof. Ya.V.Borin)
Stanislavskogo meditsinskogo instituta.
(JOINTS--DISEASES)